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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Peter Kaever

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08/18/2009

SMITH LAW OFFICE

8000 EXCELSIOR DRIVE, SUITE 301

MADISON, WI 53717

EXAMINER

SANDERSON, JOSEPH W

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,159	Applicant(s) KAEVER ET AL.	
	Examiner Joseph W. Sanderson	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-18, 20-28 and 31-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-18, 20-28 and 31-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/21/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 30 April 2009. These drawings are not acceptable.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the discontinuity in the pressure curve must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-5, 7-18, 20-28 and 31-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original disclosure does not provide for one of ordinary skill to use a pressure change duration having speed rate changes that does not exceed the duration of a duration having no speed rate changes.

The original disclosure further does not discuss a pulsator actuator, nor controlling the actuator based on measurement signals.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-5, 7-17 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 cites a standard pressure change phase duration in which no pressure changing speed rates are made, but later indicate the use of two speed rates. Due to the wording of the claim, it is unclear if these speed rate changes occur in a comparable hypothetical duration without speed changes, or if these rate changes are parts of the duration without speed changes.

If the latter case, it is unclear how a duration without speed changes can comprise speed changes.

The term "substantially" in claim 1 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, the duration with changing speed change rates "not substantially exceed[ing]" one without is rendered indefinite.

Claim 9 recites the limitation "the liner" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 cites the cross-section of the valve changed in multiple stages, however it is unclear if this refers to a process of use or assembly (e.g. replacement steps).

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on

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notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “discontinuous” in claim 24 is used by the claim to mean “a change in the function defining the curve”, while the accepted meaning is “a non-continuous function curve” (i.e. a curve that cannot be drawn without lifting pen from paper). The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 7-12, 14, 17, 18, 21-23, 26, 28 and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Grimm et al. (US 5 970 910).

Regarding independent claim 1:

As best understood, Grimm discloses a method for milking comprising:

defining a standard pressure duration in which no changes to pressure changing speed rates are made (this is read as a hypothetical duration strictly for the purposes of comparison later in the claim, and is equal to the duration of periods a-d in Fig 9);

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generating a pulsed vacuum in a pulse chamber of a teat cup by altering the vacuum during pressure changing phases (pulsator 11 alternates pressures vacuum in cup 2);

controlling a pressure curve for the duration of one pressure changing phase with at least two pressure changing speed rates (the graph in Fig 9 indicates that there is a variation in at least phases a and c by the variation of the pressure gradient); and

limiting the total duration for the pressure changing phase, with at least two pressure speed changing rates, to not substantially exceed the defined pressure changing phase duration (at most, they are equal).

Regarding independent claim 18:

Grimm discloses a pulsator comprising a controller (18) which is capable of adjusting the pressure-time curve as claimed.

Regarding claims 2-4:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the pressure curve being controlled during the change phases by an adjustable unit (adjustable throttle 26; col 7, lines 32-33 and 53-55).

Regarding claim 5:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the changing the pressure changing speed rates substantially continuously (indicated by the continuous curve in Fig 9).

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Regarding claim 7:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the curve of the first stage of the ventilation phase as flatter than a subsequent stage (the beginning of c is flat, then steeply declines).

Regarding claim 8:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the curve in the first stage of the evacuation phase as steeper than in a subsequent stage (the curve levels off as it approaches b).

Regarding claim 9:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the shift between pressure changing speed rates occurring in the pulse chamber when the liner is in contact with an animal teat (the device is in use on an animal, as intended).

Regarding claims 10, 12, 23, 26 and 31:

The discussion above regarding claims 1 and 18 is relied upon.

Grimm discloses the curve of the changing phases adjusted according to a characteristic of a valve (adjustable throttle 26) of the pulsator, the valve opening cross-section variably changing, and the pulsator valve in communication with the controller (necessary for operation, but also variously depicted in Figs 11-3, 5 and 6).

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Regarding claim 11:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the free-flow resistance varied between the teat cup and pulsator valve (due to 26).

Regarding claim 14:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the valve cross-section changed continuously (as evidenced by the pressure curve).

Regarding claim 17:

The discussion above regarding claim 1 is relied upon.

Grimm discloses the pressure measured in the pulsation chamber (col 6, lines 12-16) and controlling a pulsator actuator based on the measurement (supplies an output signal through which the other components are controlled, via 18).

Regarding claims 21 and 22:

The discussion above regarding claim 18 is relied upon.

Grimm discloses a control device (18) controlling the pressure curve during the changing phases (evidenced by Fig 9).

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Regarding claim 28:

The discussion above regarding claim 18 is relied upon.

Grimm discloses at least one direct valve (28) in communication with the controller (as seen in Fig 2).

Regarding claim 32:

The discussion above regarding claim 18 is relied upon.

Grimm discloses a nozzle in communication with the controller (a nozzle is a terminal portion of a fluid conduit, and thus the outputs of any of the fluid conduits in the system may be considered a nozzle).

Regarding claim 33:

The discussion above regarding claim 18 is relied upon.

Grimm discloses a pulsator valve (26 or 28) in communication with the controller (as variously depicted) defining a valve chamber (for the fluid to flow through), and a valve closing element disposed in the pulsate valve chamber for movement therein (adjustable valves inherently have some means to alter the size of the opening, and no-return valves having closure means to prevent backflow through the opening).

9. Claims 1, 12, 13, 18, 20 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Innings et al. (US 6 009 832).

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Regarding independent claim 1:

As best understood, Innings discloses a method for milking comprising:

defining a standard pressure duration in which no changes to pressure changing speed rates are made (this is read as a hypothetical duration strictly for the purposes of comparison later in the claim, and is equal to the duration of periods a-d in Figs 2 and 3);

generating a pulsed vacuum in a pulse chamber of a teat cup by altering the vacuum during pressure changing phases (pulsator 16 alternates pressures vacuum in cup 3);

controlling a pressure curve for the duration of one pressure changing phase with at least two pressure changing speed rates (the graphs in Figs 2 and 3 indicate that there is a variation in at least phases a and c by the variation of the pressure gradient); and

limiting the total duration for the pressure changing phase, with at least two pressure speed changing rates, to not substantially exceed the defined pressure changing phase duration (at most, they are equal).

Regarding independent claim 18:

Innings discloses a pulsator comprising a controller (20) which is capable of adjusting the pressure-time curve as claimed.

Regarding claims 12, 13 and 23-25:

The discussion above regarding claims 1 and 18 is relied upon.

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Innings discloses a valve (28) in communication with the controller (as seen in Fig 1) changed in a plurality of stages (the valve creates the multi-staged curve of Figs 2 and 3), and thus the opening cross-section is discontinuously variable.

Regarding claim 20:

The discussion above regarding claim 18 is relied upon.

Innings discloses at least one timing element (23, 24; col 7, line 66 – col 8, line 5) through which the duration of a stage can be adjusted.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimm ('910) in view of Kaneko (US 5 897 304).

The discussion above regarding claim 12 is relied upon.

Grimm discloses a pulsator valve, but does not disclose the valve maintained in a floating position during at least one stage of a pressure changing phase.

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Kaneko discloses a pulsator valve (96) that is maintained in a floating position during an evacuation phase (col 6, lines 4-14) as an alternative to a variety of other equivalent valves (col 6, lines 17-21).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Grimm to use a floating valve as taught by Kaneko as this is a well-known functionally equivalent means for predictably regulating the pressure flow.

Grimm as modified would render the floating position as variable (capable of being varied), as varying forces acting upon the valve would affect the position differently.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimm ('910) in view of Krone (US 5 628 491).

Regarding claim 27:

The discussion above regarding claim 18 is relied upon.

Grimm discloses a pulsator main valve, but does not disclose a pilot valve.

Krone teaches a pilot valve for controlling a main pulsator valve (abstract; col 1, lines 4-6).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Grimm to use the pilot valve/main valve combination as taught by Krone for the well-known predictable advantage of controlling the main valve to provide easy control of high pressure/flow lines, and since pilot valves are well-known predictable means for activating main pulsator valves.

Grimm as modified would render the valves in communication with the controller, as the controller is the device which activates the valves for use.

Response to Arguments

13. Applicant's arguments filed 30 April 2009 have been fully considered but they are not persuasive.

In response to applicant's arguments that Grimm et al. does not teach a milking method “without substantially increasing milking time” (starting page 16, para 1), Grimm anticipates the steps of the method as outlined by the claims. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's argument that the Grimm fail to show certain features of applicant's invention (page 16, para 1), it is noted that the features upon which applicant relies (i.e., animal comfort) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that Innings does not control a pressure curve (page 17, para 2), the invention is directed to “Methods of controlling the milking of an animal” (see

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title). Figs 2 and 3 show the pressure curves during different flow conditions. The controller controls the process of milking, which produces these graphs, and thus controls the curves.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph W. Sanderson whose telephone number is 571-272-0474. The examiner can normally be reached on M 6:30 am - 11:30 am, T-F 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on 571-272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/
Supervisory Patent Examiner, Art Unit 3644

/J. W. S./
Examiner, Art Unit 3644